

GEORGE STREET PARKADE PROJECT
QUANTITY SURVEYOR'S OPINION AS TO REASONABLE COST
DECEMBER 20, 2021

GEORGE STREET PARKADE PROJECT – QUANTITY SURVEYOR’S OPINION

We were retained by the City of Prince George (the “City”) to undertake a detailed independent review of the issues that arose in relation to the construction of the George Street Parkade project (the “Parkade”). The results of our review are found in our report dated June 3, 2021.

To address the question of whether the City received value for dollar in relation to the construction of the Parkade, the City instructed us, as a follow up step to our review, to seek advice from a qualified professional.

In approaching the question of whether value for dollar has been obtained on a construction project, the first step is to seek an objective opinion of the reasonable costs of constructing the project by engaging the services of an experienced quantity surveyor. Where the quantity surveyor determines that the reasonable costs of constructing the project were in the range of the actual costs of constructing it, the review usually ends there. Where the quantity surveyor determines that the reasonable costs of constructing the project were significantly below the actual costs of constructing it, the review usually proceeds to an audit of the construction project, both from an administrative and financial standpoint.

As the first step in determining whether the City received value for dollar in relation to the construction of the Parkade, we retained SSA Quantity Surveyors Ltd. (“SSA”) to provide an objective opinion of the reasonable costs of constructing the Parkade. SSA’s Opinion Report is appended to this covering report.

In its Opinion Report, SSA:

1. Describes its retainer as being “to provide an expert opinion concerning the construction cost of completed, that includes foundations, raft foundation, columns, slab bands, suspended slab, retaining walls, partition walls and associated work on the construction of the Park House Parkade located at 1079 6th Avenue, Prince George, BC”.
2. Concludes that “the probable and reasonable cost (excluding GST) for construction of the parkade assuming a May 1, 2018 start with a 12-month construction period lies in the range of \$20,700,000 to \$20,800,000”.

SSA arrived at its conclusion as to the probable and reasonable costs of constructing the Parkade by calculating the expected costs to construct the Parkade in current day dollars and then discounting those current day dollars to 2019 dollars. SSA’s detailed calculations are included in tables at Section 10 of the Opinion Report. It should be noted that the detailed calculations may appear to be incorrect if unit rates are multiplied by units. We have confirmed with SSA that this is a result of rounded figures being included in the tables.

SSA calculated the expected costs to build the Parkade in current day dollars to be approximately \$23 million, and discounted that amount by 10%, to arrive at its opinion that the probable and reasonable cost for construction of the Parkade would have been between \$20,700,000 to \$20,800,000.

In discussing its conclusion as to the probable and reasonable costs of constructing the Parkade with SSA, SSA advised us that its conclusion would differ depending based on the discount rate applied, and that the discount rate applied would depend on the time frame of construction.

The Parkade was not completed in May 2019, as assumed by SSA, but was completed over a year later. As a result, the discount rate to be applied to the costs to construct the Parkade in current day dollars (i.e., approximately \$23 million) should be in the range of 6%. Applying that discount rate, the cost in 2020 dollars to construct the Parkade would reasonably have been approximately \$21.6 million.

Ultimately, the actual costs of constructing the Parkade were approximately \$22.5 million, or approximately 4% more than the probable and reasonable costs, in 2020 dollars, of constructing the Parkade of \$21.6 million.

In our experience, a variation of 4% between the theoretical costs of construction for a project determined by a quantity surveyor and the actual costs of construction is not extraordinary; it is quite common.

In light of the results of the SSA Opinion Report, and our further discussions with SSA, an audit of the Parkade, both from an administrative and financial standpoint, is not warranted given the costs of such an audit.

YOUNG ANDERSON



Sukhbir Manhas

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OPINION REPORT

CONSTRUCTION COST ESTIMATE FOR PARKADE

**PARK HOUSE PARKADE, 1079 6TH AVENUE,
PRINCE GEORGE, BC**

December 10, 2021



SSA QUANTITY SURVEYORS LTD

COST PLANNING | VALUE MANAGEMENT | PROJECT CONTROLS

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OPINION REPORT
CONSTRUCTION COST ESTIMATE FOR PARKADE
PARK HOUSE PARKADE, 1079 6TH AVENUE, PRINCE GEORGE, BC
December 10, 2021

1. INTRODUCTION

SSA Quantity Surveyors Ltd. (SSAQS) has been retained by Mr. Sukhbir Manhas of Young Anderson to provide an expert opinion concerning the construction cost of completed works of a parkade that includes foundations, raft foundation, columns, slab bands, suspended slab, retaining walls, partition walls and associated work on the construction of the Park House Parkade located at 1079 6th Avenue, Prince George, BC.

This opinion in this report is completely impartial, and is not intended to advance the interests of any particular party.

2. OPINION REQUESTED

SSAQS was requested by Mr. Manhas to:

- Provide an opinion on the cost associated with the construction of works including parkade foundations, raft foundation, columns, slab bands, suspended slab, retaining walls, parkade partition walls and associated work for the above project, based on drawings, plans and specifications received.

3. PROPRIETARY INFORMATION AND CONDITIONS

This report has been prepared solely for the use of Mr. Sukhbir Manhas of Young Anderson. Any other use and/or dissemination of this report in whole or in part is strictly prohibited without our specific written consent.

This report is intended solely for the purpose stated above. We specifically assume no responsibility nor liability for losses to any parties as a result of the use of this report in any manner.

4. CONDUCT OF THIS REPORT

This report has been authored by Mr. Timothy Spiegel, B.Sc. (QS), PQS, MRICS, Senior Principal of this company assisted by Mr. Eugene van den Berg, B.Sc. Construction Economics (QS).

This is an opinion report only.

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5. METHODOLOGY

- a) We have reviewed the information provided. Please refer to Section 6 below.
- b) We have prepared our opinion of the cost of the construction work, based on the information provided.
- c) We have provided our opinion in this report.

6. DOCUMENTS

We have received and reviewed the following:

- a) Emailed information from Mr. Sukhbir Manhas, dated June 22, 2021 and July 05, 2021.
- b) Architectural drawings (A-0.1 – A-0.3, A-1.0 – A-1.1f, A-2.0 – A-2.3, A-3.0 – A-3.2, A-4.0 – A-4.2, A-6.1 – A-6.3, A-7.0 – A-7.2, A-8.0 – A-8.10, A-9.0 – A-9.4 & A-10.0 – A-10.6) provided in electronic format prepared by RLA Architects Incorporated, dated April 24, 2019 Re-issued for construction.
- c) Structural drawings (S1.1, S2.1 – S2.2, S3.0 – S3.5a, S4.1 – S4.5a, S5.1 & S6.1) provided in electronic format prepared by KSM Associates LTD. with project number 17-1350-123, dated August 29, 2018 to May 22, 2019
- d) Electrical drawings (E-1.0, E-2.0 – E-2.4, E-6.1 – E-6.3) provided in electronic format prepared by NRS Engineering LTD., dated July 30, 2018 issued for construction.
- e) Mechanical drawings (M-1.1 – M-1.2, M-2.1 – M-2.1F, M-3.1 – M-3.1F, M-4.1 – M-4.6) provided in electronic format prepared by Rocky Point Engineering LTD., dated September 30, 2018 issued for construction. Mechanical drawing (MSK-4.5.2) dated August 2018. Mechanical drawing (MSK-2.2C.6) dated April 2019. Mechanical drawings (MSK-1.2.2 – MSK-1.2.4, MSK-3.1A.4, MSK-3.1E.1, MSK-4.1.2 – MSK-4.1.3) dated June 2019. Mechanical drawings (MSK-2.2A.6, MSK-2.2B.8, MSK-2.2D.2 – MSK-2.2D.3, MSK-2.2E.4 – MSK-2.2E.6, MSK-2.2.8) dated October 2019.
- f) Fire Protection drawings (FP-1 – FP-6) provided in electronic format prepared by DMC Fire Protection LTD. with project number NW-18-1673, dated August 03, 2019 issued for permit.
- g) Canadian Construction Documents Committee, CCDC 3 – Cost Plus Contract, between City of Prince George and A&T Project Developments Inc., dated January 16, 2018.

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7. FACTS AND ASSUMPTIONS

- We have relied upon the following facts and assumptions:
 - i. The documents noted in 6 above.
 - ii. Discussions with Mr. Sukhbir Manhas.
 - iii. In house data base information on construction costs.
 - iv. Measurements of quantities that we have undertaken based on the documents received.
 - v. We have assumed:
 - 1. Demolition of previous building structures are not included in the parkade construction works.
 - 2. Stairs for Buildings 1 to 4 are not included in the parkade construction works. Only Stairs 9A, 10A and 11A are included in this estimate.
 - 3. Elevators for Buildings 1 to 4 are not included in parkade construction works. Only Elevator at Stair 11A is included in this estimate.
 - 4. No surface finish and insulation included to the top of the parkade suspended slab in and around Buildings 1 to 4. Only surface parking finish and insulation are included in this estimate.
 - 5. Allowance have been made for parkade storage lockers and bike racks.
 - 6. No boundary walls and/or fences have been included in this estimate.
 - 7. No landscaping has been included in this estimate.
 - vi. The work was set to be carried out starting on May 1, 2018 with Substantial Performance of the work completed no later than the 1st day of May 2019.
 - vii. The work included:
 - 1. Bulk basement excavation of soil, including minor cut and fill site grading.
 - 2. Parkade foundations including excavation, backfilling and associated work.
 - 3. Raft slab and ramp construction including excavation, backfilling and associated work.
 - 4. Parkade concrete roof slab construction including columns, slab bands and associated work.
 - 5. Stairs 9A, 10A and 11A enclosures, including exterior walls, interior walls, roof construction, roof finish, doors and associated work.
 - 6. Road paving finish and insulation to surface parking area including associated work.
 - 7. Basement parking concrete retaining walls and insulation.
 - 8. Surface parking upstand concrete walls and lamp columns.
 - 9. Trellis structures to residential and public parking ramps.
 - 10. Interior partition walls to parkade area, including doors.

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11. Spray foam insulation to underside of concrete parkade roof slab, no spray foam to underside of slab to surface parking area.
 12. Electrical and mechanical work required for parkade operation. Electrical or mechanical work for residential buildings not included.
 13. Minor works associated with the above-mentioned activities.
- viii. All utilities beyond the property line are excluded.

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8. OPINION

In reviewing the information provided, we note that the original Preliminary Budget for the Parkade Construction based on a CCDC3 Cost Plus Contract was \$12,012,054.00 plus 5% profit and GST.

Our opinion includes:

- a. Bulk basement excavation of soil, including minor cut and fill site grading.
- b. Parkade foundations including excavation, backfilling and associated work.
- c. Raft slab and ramp construction including excavation, backfilling and associated work.
- d. Parkade concrete roof slab construction including columns, slab bands and associated work.
- e. Stairs 9A, 10A and 11A enclosures, including exterior walls, interior walls, roof construction, roof finish, doors and associated work.
- f. Road paving finish and insulation to surface parking area including associated work.
- g. Basement parking concrete retaining walls and insulation.
- h. Surface parking upstand concrete walls and lamp columns.
- i. Trellis structures to residential and public parking ramps.
- j. Interior partition walls to parkade area, including doors.
- k. Spray foam insulation to underside of concrete parkade roof slab, no spray foam to underside of slab to surface parking area.
- l. Electrical and mechanical work required for parkade operation. Electrical or mechanical work for residential buildings not included.
- m. Minor works associated with the above-mentioned activities.

Our opinion has been based upon current construction costs and then deescalated to provide an opinion that reflects what we would have expected at January 2018 when the CDDC3 Contract was signed. The de-escalation factor is based upon our in-house record of escalation during the period from May 2018 to August 2021. We have also referred to the Statistics Canada, Table 18-10-0135-01 Building construction price indexes, by type of building for Commercial Buildings for Edmonton and Vancouver which are the closest locations for which Statistics Canada provides such information.

It is our opinion that the probable and reasonable cost (**excluding GST**) for construction of the parkade assuming a May 1, 2018 start with a 12 month construction period lies in the range of **\$20,700,000 to \$20,800,000**.

Detail is included in this report.

9. ACKNOWLEDGEMENT

We acknowledge that this is our independent opinion as an expert in the field of Quantity Surveying/Cost Consulting.

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SSA QUANTITY SURVEYORS LTD.



Director

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10. DETAILED BACKUP

SUMMARY OF ESTIMATED CONSTRUCTION COSTS (VALUES ROUNDED TO THOUSANDS)				
Description		Estimated Value		
		\$	Gross Floor Area (GFA)	
			m ²	S.F.
			10,060	108,285
		\$/m ²	\$/SF	
Net New Construction - Building		\$17,280,000	\$1,717.69	\$159.58
Design Contingency (5%)	5.00%	\$889,000	\$88.37	\$8.21
Escalation Contingency (3%)	3.00%	\$560,000	\$55.67	\$5.17
TOTAL BUILDING		\$18,729,000	\$1,861.73	\$172.96
Site Development		\$493,000	\$49.01	\$4.55
BUILDING AND SITE DEVELOPMENT		\$19,222,000	\$1,911	\$177.51
Construction Contingency	3.00%	\$577,000	\$57.36	\$5.33
SUB-TOTAL		\$19,799,000	\$1,968.09	\$182.84
Consultant Design Fees		\$673,000	Excluded	Excluded
Consultant Contract Administration Fees		\$101,000	\$10.04	\$0.93
Building Permit		Excluded	Excluded	Excluded
Development Cost Charges		Excluded	Excluded	Excluded
Legal Fees		Excluded	Excluded	Excluded
Owner's Administrative Costs		Excluded	Excluded	Excluded
Insurance		\$154,000	\$15.31	\$1.42
Off Site Services		Excluded	Excluded	Excluded
General Project Reserve		Excluded	Excluded	Excluded
SUB-TOTAL		\$20,727,000	\$1,993.44	\$185.20
GST	5.00%	Excluded	Excluded	Excluded
TOTAL		\$20,727,000	\$1,993.44	\$185.20
Notes:				
<p>Estimates of construction costs prepared by SSA Quantity Surveyors Limited (SSAQS) represent our best judgment, as Professional Cost Consultants/Quantity Surveyors, familiar with the construction industry. It is recognised, however, that we do not have control over the cost of labour, materials or equipment, over architectural and/or engineering design, over a contractor's method of determining prices, or over market or negotiating conditions. Accordingly, we cannot and do not warrant or represent that bids or negotiated prices will not vary from this nor any subsequent estimate of design/construction cost or evaluation prepared by or agreed to by us.</p>				

ELEMENTAL SUMMARY SHEET				GFA = 10,060.0 m ²			
ELEMENT/SUB-ELEMENT	Quantity	Unit Rate	Sub-Element	Element	\$/m2	\$/m2	%
01 SUBSTRUCTURE				\$6,315,609		\$627.79	32.8%
011 Normal Foundations	10,060 m2	\$319.04	\$3,209,590		\$319.04		
012 Basement Excavation	10,060 m2	\$308.75	\$3,106,020		\$308.75		
013 Special Conditions	0 m2	\$0.00	\$0		\$0.00		
02 STRUCTURE				\$4,101,393		\$407.69	21.3%
021 Lowest Floor Construction	10,060 m2	\$2.41	\$24,199		\$2.41		
022 Upper Floor Construction	0 m2	\$0.00	\$0		\$0.00		
023 Roof Construction	10,060 m2	\$405.29	\$4,077,193		\$405.29		
03 EXTERIOR CLADDING				\$1,658,498		\$164.86	8.6%
031 Roof Finish	2,057 m2	\$323.67	\$665,783		\$66.18		
032 Walls Below Ground Floor	1,474 m2	\$421.49	\$621,276		\$61.76		
033 Walls Above Ground Floor	401 m2	\$583.89	\$234,139		\$23.27		
034 Windows	0 m2	\$0.00	\$0		\$0.00		
035 Exterior Doors and Screens	8 No	\$3,048.25	\$24,386		\$2.42		
036 Balconies & Projections	215 m2	\$526.22	\$112,914		\$11.22		
04 INTERIOR PARTITIONS				\$49,413		\$4.91	0.3%
041 Permanent Partitions	45 m2	\$259.48	\$11,677		\$1.16		
042 Movable Partitions	0 No	\$0.00	\$0		\$0.00		
043 Doors	30 No	\$1,257.87	\$37,736		\$3.75		
05 VERTICAL MOVEMENT				\$206,925		\$20.57	1.1%
051 Stairs	5 Flts	\$12,905.00	\$64,525		\$6.41		
052 Elevators & Escalators	1 No	\$142,400.00	\$142,400		\$14.16		
06 INTERIOR FINISHES				\$647,529		\$64.37	3.4%
061 Floor Finishes	9,868 m2	\$22.25	\$219,563		\$21.83		
062 Ceiling Finishes	7,867 m2	\$48.13	\$378,660		\$37.64		
063 Wall Finishes	450 m2	\$109.57	\$49,306		\$4.90		
07 FITTINGS AND EQUIPMENT				\$195,177		\$19.40	1.0%
071 Fittings & Fixtures	10,060 m2	\$19.40	\$195,177		\$19.40		
072 Equipment	0 m2	\$0.00	\$0		\$0.00		
08 ELECTRICAL				\$547,310		\$54.40	2.8%
081 Service & Distribution	10,060 m2	\$16.81	\$169,100		\$16.81		
082 Parkade Area	10,060 m2	\$37.60	\$378,210		\$37.60		
09 MECHANICAL				\$1,504,857		\$149.59	7.8%
091 Plumbing and Drainage	10,060 m2	\$50.18	\$504,764		\$50.18		
092 Fire Protection	10,060 m2	\$24.99	\$251,349		\$24.99		
093 HVAC	10,060 m2	\$74.43	\$748,744		\$74.43		
10 OVERHEAD AND PROFIT	12.0%			\$2,053,040		\$204.08	10.7%
Sub-Total				\$17,279,752		\$1,717.67	89.8%
Design Contingency - Building	5.0%			\$863,988		\$85.88	4.5%
Escalation Contingency - Building	3.0%			\$544,312		\$54.11	2.8%
Construction Contingency - Building	3.0%			\$560,642		\$55.73	2.9%
Sub-Total				\$19,248,693		\$1,913.39	100.0%
GST on Building	5.0%			Excluded		\$0.00	0.0%
ESTIMATED NET BUILDING COST				\$19,248,693		\$1,913.39	100%

ELEMENTAL SUMMARY SHEET				GFA = 10,060.0 m ²			
ELEMENT/SUB-ELEMENT	Quantity	Unit Rate	Sub-Element	Element	\$/m2	\$/m2	%
11 SITE DEVELOPMENT				\$492,862		\$48.99	
111 General			\$337,706		\$33.57		
112 M & E Site Services			\$102,350		\$10.17		
113 Off-site costs			\$0		\$0.00		
114 Demolition			\$0		\$0.00		
115 Overhead and Profit	12.0%		\$52,806		\$5.25		
116 Design Contingency - Site	5.0%		\$24,643	\$56,159	\$2.45	\$5.58	
117 Escalation Contingency - Site	3.0%		\$15,525		\$1.54		
118 Construction Contingency - Site	3.0%		\$15,991		\$1.59		
Sub-Total				\$549,022		\$54.57	
GST on Site Development	5.0%			Excluded		\$0.00	
ESTIMATED SITE DEVELOPMENT				\$549,022		\$54.57	
TOTAL ESTIMATED CONSTRUCTION COST				\$19,797,714		\$1,967.96	

SUMMARY OF ESTIMATED CONSTRUCTION COSTS (VALUES ROUNDED TO THOUSANDS)				
		Estimated Value		
		Gross Floor Area (GFA)		
			m ²	S.F.
			10,060	108,285
Description		\$	\$/m ²	\$/SF
Net New Construction - Building		\$19,162,000	\$1,904.77	\$176.96
Design Contingency (5%)	5.00%	\$986,000	\$98.01	\$9.11
Escalation Contingency (3%)	3.00%	\$621,000	\$61.73	\$5.73
TOTAL BUILDING		\$20,769,000	\$2,064.51	\$191.80
Site Development		\$554,000	\$55.07	\$5.12
BUILDING AND SITE DEVELOPMENT		\$21,323,000	\$2,120	\$196.92
Construction Contingency	3.00%	\$640,000	\$63.62	\$5.91
SUB-TOTAL		\$21,963,000	\$2,183.20	\$202.83
Consultant Design Fees		\$746,000	Excluded	Excluded
Consultant Contract Administration Fees		\$112,000	\$11.13	\$1.03
Building Permit		Excluded	Excluded	Excluded
Development Cost Charges		Excluded	Excluded	Excluded
Legal Fees		Excluded	Excluded	Excluded
Owner's Administrative Costs		Excluded	Excluded	Excluded
Insurance		\$171,000	\$17.00	\$1.58
Off Site Services		Excluded	Excluded	Excluded
General Project Reserve		Excluded	Excluded	Excluded
SUB-TOTAL		\$22,992,000	\$2,211.33	\$205.44
GST	5.00%	Excluded	Excluded	Excluded
TOTAL		\$22,992,000	\$2,211.33	\$205.44
Notes:				
<p>Estimates of construction costs prepared by SSA Quantity Surveyors Limited (SSAQS) represent our best judgment, as Professional Cost Consultants/Quantity Surveyors, familiar with the construction industry. It is recognised, however, that we do not have control over the cost of labour, materials or equipment, over architectural and/or engineering design, over a contractor's method of determining prices, or over market or negotiating conditions. Accordingly, we cannot and do not warrant or represent that bids or negotiated prices will not vary from this nor any subsequent estimate of design/construction cost or evaluation prepared by or agreed to by us.</p>				

ELEMENTAL SUMMARY SHEET				GFA = 10,060.0 m ²			
ELEMENT/SUB-ELEMENT	Quantity	Unit Rate	Sub-Element	Element	\$/m2	\$/m2	%
01 SUBSTRUCTURE				\$7,096,190		\$705.39	33.2%
011 Normal Foundations	10,060 m2	\$358.48	\$3,606,280		\$358.48		
012 Basement Excavation	10,060 m2	\$346.91	\$3,489,910		\$346.91		
013 Special Conditions	0 m2	\$0.00	\$0		\$0.00		
02 STRUCTURE				\$4,608,306		\$458.08	21.6%
021 Lowest Floor Construction	10,060 m2	\$2.70	\$27,190		\$2.70		
022 Upper Floor Construction	0 m2	\$0.00	\$0		\$0.00		
023 Roof Construction	10,060 m2	\$455.38	\$4,581,116		\$455.38		
03 EXTERIOR CLADDING				\$1,863,481		\$185.24	8.7%
031 Roof Finish	2,057 m2	\$363.67	\$748,071		\$74.36		
032 Walls Below Ground Floor	1,474 m2	\$473.58	\$698,063		\$69.39		
033 Walls Above Ground Floor	401 m2	\$656.05	\$263,077		\$26.15		
034 Windows	0 m2	\$0.00	\$0		\$0.00		
035 Exterior Doors and Screens	8 No	\$3,425.00	\$27,400		\$2.72		
036 Balconies & Projections	215 m2	\$591.26	\$126,870		\$12.61		
04 INTERIOR PARTITIONS				\$55,520		\$5.52	0.3%
041 Permanent Partitions	45 m2	\$291.56	\$13,120		\$1.30		
042 Movable Partitions	0 No	\$0.00	\$0		\$0.00		
043 Doors	30 No	\$1,413.33	\$42,400		\$4.21		
05 VERTICAL MOVEMENT				\$232,500		\$23.11	1.1%
051 Stairs	5 Flts	\$14,500.00	\$72,500		\$7.21		
052 Elevators & Escalators	1 No	\$160,000.00	\$160,000		\$15.90		
06 INTERIOR FINISHES				\$727,561		\$72.32	3.4%
061 Floor Finishes	9,868 m2	\$25.00	\$246,700		\$24.52		
062 Ceiling Finishes	7,867 m2	\$54.08	\$425,461		\$42.29		
063 Wall Finishes	450 m2	\$123.11	\$55,400		\$5.51		
07 FITTINGS AND EQUIPMENT				\$219,300		\$21.80	1.0%
071 Fittings & Fixtures	10,060 m2	\$21.80	\$219,300		\$21.80		
072 Equipment	0 m2	\$0.00	\$0		\$0.00		
08 ELECTRICAL				\$614,955		\$61.13	2.9%
081 Service & Distribution	10,060 m2	\$18.89	\$190,000		\$18.89		
082 Parkade Area	10,060 m2	\$42.24	\$424,955		\$42.24		
09 MECHANICAL				\$1,690,851		\$168.08	7.9%
091 Plumbing and Drainage	10,060 m2	\$56.38	\$567,150		\$56.38		
092 Fire Protection	10,060 m2	\$28.07	\$282,415		\$28.07		
093 HVAC	10,060 m2	\$83.63	\$841,286		\$83.63		
10 OVERHEAD AND PROFIT	12.0%			\$2,053,040		\$204.08	9.6%
Sub-Total				\$19,161,705		\$1,904.74	89.8%
Design Contingency - Building	5.0%			\$958,085		\$95.24	4.5%
Escalation Contingency - Building	3.0%			\$603,594		\$60.00	2.8%
Construction Contingency - Building	3.0%			\$621,702		\$61.80	2.9%
Sub-Total				\$21,345,085		\$2,121.78	100.0%
GST on Building	5.0%			Excluded		\$0.00	0.0%
ESTIMATED NET BUILDING COST				\$21,345,085		\$2,121.78	100%

ELEMENTAL SUMMARY SHEET				GFA = 10,060.0 m ²			
ELEMENT/SUB-ELEMENT	Quantity	Unit Rate	Sub-Element	Element	\$/m2	\$/m2	%
11 SITE DEVELOPMENT				\$553,778		\$55.05	
111 General			\$379,445		\$37.72		
112 M & E Site Services			\$115,000		\$11.43		
113 Off-site costs			\$0		\$0.00		
114 Demolition			\$0		\$0.00		
115 Overhead and Profit	12.0%		\$59,333		\$5.90		
116 Design Contingency - Site	5.0%		\$27,689	\$63,100	\$2.75	\$6.27	
117 Escalation Contingency - Site	3.0%		\$17,444		\$1.73		
118 Construction Contingency - Site	3.0%		\$17,967		\$1.79		
Sub-Total				\$616,878		\$61.32	
GST on Site Development	5.0%			Excluded		\$0.00	
ESTIMATED SITE DEVELOPMENT				\$616,878		\$61.32	
TOTAL ESTIMATED CONSTRUCTION COST				\$21,961,963		\$2,183.10	

Description	Quantity	Rate	Amount
ELEMENT 01 - SUBSTRUCTURE			
SUB-ELEMENT 011 - NORMAL FOUNDATIONS			
Strip foundation size 914mm wide x 254mm thick comprising:			
Excavation	14 m3	45.00	\$648
Concrete - supply and place	6 m3	320.00	\$1,783
Formwork to sides	12 m2	100.00	\$1,219
Reinforcement	557 kg	2.60	\$1,449
Backfill with imported material	9 m3	65.00	\$574
Disposal	6 m3	50.00	\$279
Elevator Pads size 305mm thick comprising:			
Excavation	19 m3	45.00	\$851
Concrete - supply and place	12 m3	320.00	\$3,928
Formwork to sides	18 m2	100.00	\$1,769
Reinforcement	2,701 kg	2.60	\$7,022
Backfill with imported material	7 m3	65.00	\$431
Disposal	12 m3	50.00	\$614
Elevator foundation walls size 203mm thick comprising:			
Concrete - supply and place	15 m3	320.00	\$4,872
Formwork to sides	150 m2	100.00	\$15,000
Reinforcement	3,045 kg	2.60	\$7,917
Raft slab size 508mm thick comprising:			
Concrete - supply and place	5,166 m3	320.00	\$1,653,053
Formwork to edges	232 m2	100.00	\$23,205
Reinforcement	439,092 kg	2.60	\$1,141,640
Compacted material	1,013 m3	65.00	\$65,839
Waterproofing membrane	10,547 m2	45.00	\$474,615
Foundation sundries comprising:			
Allowance for foundation steps, slopes and phased casting	1 l/s	170,000.00	\$170,000
Allowance for perimeter footing drainage	455 m	65.00	\$29,575
TOTAL SUB-ELEMENT 011 - NORMAL FOUNDATIONS			\$3,606,280

Description	Quantity	Rate	Amount
<u>ELEMENT 01 - SUBSTRUCTURE</u>			
<u>SUB-ELEMENT 012 - BASEMENT EXCAVATION</u>			
Bulk excavation comprising:			
Excavation and disposal	40,285 m3	60.00	\$2,417,100
Backfill behind walls	2,474 m3	65.00	\$160,810
Shoring against open excavation	1,624 m2	500.00	\$812,000
Water pumping allowance	1 l/s	100,000.00	\$100,000
<u>TOTAL SUB-ELEMENT 012 - BASEMENT EXCAVATION</u>			\$3,489,910
<u>ELEMENT 01 - SUBSTRUCTURE</u>			
<u>SUB-ELEMENT 013 - SPECIAL CONDITIONS</u>			
Not Applicable			\$0
<u>TOTAL SUB-ELEMENT 013 - SPECIAL CONDITIONS</u>			\$0

Description	Quantity	Rate	Amount
<u>ELEMENT 02 - STRUCTURE</u>			
<u>SUB-ELEMENT 021 - LOWEST FLOOR CONSTRUCTION</u>			
152mm Thick slab on grade comprising:			
Concrete - supply and place	29 m3	320.00	\$9,436
Formwork to edges	12 m2	100.00	\$1,246
Reinforcement	2,506 kg	2.60	\$6,517
Compacted material	19 m3	65.00	\$1,261
Waterproofing membrane	194 m2	45.00	\$8,730
<u>TOTAL SUB-ELEMENT 021 - LOWEST FLOOR CONSTRUCTION</u>			\$27,190
<u>ELEMENT 02 - STRUCTURE</u>			
<u>SUB-ELEMENT 022 - UPPER FLOOR CONSTRUCTION</u>			
Not Applicable			\$0
<u>TOTAL SUB-ELEMENT 022 - UPPER FLOOR CONSTRUCTION</u>			\$0

Description	Quantity	Rate	Amount
<u>ELEMENT 02 - STRUCTURE</u>			
<u>SUB-ELEMENT 023 - ROOF CONSTRUCTION</u>			
Parkade Roof Structure Comprising:			
Concrete columns size 305mm x 610mm comprising:			
Concrete - supply and place	68 m3	320.00	\$21,797
Formwork to sides	670 m2	100.00	\$67,000
Reinforcement	18,051 kg	2.60	\$46,932
Concrete columns size 254mm x 914mm comprising:			
Concrete - supply and place	2 m3	320.00	\$481
Formwork to sides	15 m2	100.00	\$1,514
Reinforcement	399 kg	2.60	\$1,037
Concrete walls size 203mm thick comprising:			
Concrete - supply and place	326 m3	320.00	\$104,183
Formwork to sides	3,208 m2	100.00	\$320,760
Reinforcement	65,114 kg	2.60	\$169,297
Concrete slab band size 1,830mm x 457mm comprising:			
Concrete - supply and place	36 m3	320.00	\$11,583
Formwork to sides	40 m2	100.00	\$3,956
Reinforcement	7,239 kg	2.60	\$18,823
Concrete slab band size 2,440mm x 457mm comprising:			
Concrete - supply and place	294 m3	320.00	\$94,102
Formwork to sides	241 m2	100.00	\$24,104
Reinforcement	58,814 kg	2.60	\$152,916
Concrete slab band size 3,050mm x 457mm comprising:			
Concrete - supply and place	1,360 m3	320.00	\$435,042
Formwork to sides	891 m2	100.00	\$89,148
Reinforcement	271,901 kg	2.60	\$706,944
Concrete roof slab 203mm thick comprising:			
Concrete - supply and place	466 m3	320.00	\$149,148
Formwork to sides and soffit	2,333 m2	100.00	\$233,295
Reinforcement	55,931 kg	2.60	\$145,419
Concrete roof slab 216mm thick comprising:			
Concrete - supply and place	24 m3	320.00	\$7,603
Formwork to sides and soffit	120 m2	100.00	\$11,950
Reinforcement	2,851 kg	2.60	\$7,413
Concrete roof slab 229mm thick comprising:			
Concrete - supply and place	218 m3	320.00	\$69,763

Description	Quantity	Rate	Amount
Formwork to sides and soffit	994 m2	100.00	\$99,368
Reinforcement	26,161 kg	2.60	\$68,018
Concrete roof slab 254mm thick comprising:			
Concrete - supply and place	654 m3	320.00	\$209,377
Formwork to sides and soffit	2,622 m2	100.00	\$262,223
Reinforcement	78,516 kg	2.60	\$204,143
Concrete roof slab 279mm thick comprising:			
Concrete - supply and place	579 m3	320.00	\$185,167
Formwork to sides and soffit	2,125 m2	100.00	\$212,478
Reinforcement	69,438 kg	2.60	\$180,538
Concrete roof slab 292mm thick comprising:			
Concrete - supply and place	34 m3	320.00	\$11,026
Formwork to sides and soffit	132 m2	100.00	\$13,178
Reinforcement	4,135 kg	2.60	\$10,750
Roof slab construction sundries comprising:			
Allowance for upper floor steps, slopes and phased casting	1 l/s	168,000.00	\$168,000
Allowance for openings in slab for mechanical and electrical equipment	1 l/s	42,000.00	\$42,000
Surface Parking - Stair Roof Structure Comprising:			
Wood roof structure comprising:			
T&G OSB Roof sheathing	168 m2	40.00	\$6,720
Wood roof rafters	168 m2	65.00	\$10,920
Allowance for miscellaneous, plates, connections, bolts, posts, beams, etc.	1 l/s	3,000.00	\$3,000
TOTAL SUB-ELEMENT 023 - ROOF CONSTRUCTION			\$4,581,116

Description	Quantity	Rate	Amount
<u>ELEMENT 03 - EXTERIOR CLADDING</u>			
<u>SUB-ELEMENT 031 - ROOF FINISHES</u>			
Surface Parking - Stair Roof assembly comprising:			
2-ply SBS roofing membrane	168 m2	200.00	\$33,600
R30 Batt insulation	168 m2	25.00	\$4,200
16mm Gypsum wallboard	168 m2	40.00	\$6,720
Road Paving over parkade assembly comprising:			
65mm Asphalt	1,834 m2	45.00	\$82,530
100mm Granular fill material	183 m3	65.00	\$11,921
R20 102mm Subterra rigid insulation	1,834 m2	90.00	\$165,060
Drainage mat	1,834 m2	25.00	\$45,850
2-Ply SBS roofing membrane	1,834 m2	200.00	\$366,800
Concrete ramp over parkade assembly comprising:			
100mm Thick CIP Waterproof concrete	55 m2	185.00	\$10,175
R20 102mm Subterra rigid insulation	55 m2	90.00	\$4,950
100mm Granular fill material	5 m3	65.00	\$355
Drainage mat	55 m2	25.00	\$1,375
2-Ply SBS roofing membrane	55 m2	200.00	\$11,000
Roof sundries comprising:			
Fascia boards	86 m	30.00	\$2,580
Gutters	32 m	20.00	\$640
Rain water leaders	18 m	17.50	\$315
<u>TOTAL SUB-ELEMENT 031 - ROOF FINISHES</u>			\$748,071

Description	Quantity	Rate	Amount
<u>ELEMENT 03 - EXTERIOR CLADDING</u>			
<u>SUB-ELEMENT 032 - WALLS BELOW GROUND FLOOR</u>			
Basement concrete retaining walls comprising:			
Concrete - supply and place	299 m3	320.00	\$95,764
Formwork to sides	2,948 m2	100.00	\$294,840
Reinforcement	59,853 kg	2.60	\$155,617
Insulation	1,474 m2	38.00	\$56,020
Damp-proofing	1,474 m2	65.00	\$95,823
<u>TOTAL SUB-ELEMENT 032 - WALLS BELOW GROUND FLOOR</u>			\$698,063
<u>ELEMENT 03 - EXTERIOR CLADDING</u>			
<u>SUB-ELEMENT 033 - WALLS ABOVE GROUND FLOOR</u>			
Surface Parking - Stair walls Comprising:			
Fibre cement panels	180 m2	400.00	\$72,000
Vertical strapping at 406mm O.C.	180 m2	25.00	\$4,500
38mm Insulation	180 m2	24.00	\$4,320
6mm Polyethylene air/vapour barrier	180 m2	1.50	\$270
hot	180 m2	220.00	\$39,600
Surface Parking - Concrete Upstand Stair walls comprising:			
Concrete - supply and place	9 m3	320.00	\$2,858
Formwork to sides	88 m2	100.00	\$8,800
Reinforcement	1,072 kg	2.60	\$2,787
Insulation	44 m2	40.00	\$1,760
Damp-proofing	44 m2	55.00	\$2,420
Surface Parking - Concrete Upstand walls comprising:			
Concrete - supply and place	54 m3	320.00	\$17,149
Formwork to sides	528 m2	100.00	\$52,800
Reinforcement	6,431 kg	2.60	\$16,721
Insulation	264 m2	40.00	\$10,560
Damp-proofing	264 m2	55.00	\$14,520
Surface Parking - Concrete lamp columns comprising:			
Concrete - supply and place	16 m3	320.00	\$5,120
Formwork to sides	19 m2	100.00	\$1,900
Reinforcement	1,920 kg	2.60	\$4,992
<u>TOTAL SUB-ELEMENT 033 - WALLS ABOVE GROUND FLOOR</u>			\$263,077

Description	Quantity	Rate	Amount
<u>ELEMENT 03 - EXTERIOR CLADDING</u>			
<u>SUB-ELEMENT 034 - WINDOWS</u>			
Nil			\$0
<u>TOTAL SUB-ELEMENT 034 - WINDOWS</u>			\$0
<u>ELEMENT 03 - EXTERIOR CLADDING</u>			
<u>SUB-ELEMENT 035 - EXTERIOR DOORS AND SCREENS</u>			
External doors comprising:			
Hollow metal single door size 914mm x 2,032mm including wired glass view panel, metal frame, hardware and finish	4 No	1,500.00	\$6,000
Hollow metal single door size 914mm x 2,032mm including metal frame, hardware and finish	2 No	1,200.00	\$2,400
Parkade entrance door size 6,705mm x 2,286mm	2 No	9,500.00	\$19,000
<u>TOTAL SUB-ELEMENT 035 - EXTERIOR DOORS AND SCREENS</u>			\$27,400
<u>ELEMENT 03 - EXTERIOR CLADDING</u>			
<u>SUB-ELEMENT 036 - BALCONIES AND PROJECTIONS</u>			
Trellis - Resident ramp comprising:			
140mm x 140mm Wood Column	6 No	510.00	\$3,060
Glulam beams 102x419mm	106 m	220.00	\$23,320
Glulam beams 76x419mm	244 m	160.00	\$39,040
Trellis - Public Parkade ramp comprising:			
140mm x 140mm Wood Column	4 No	510.00	\$2,040
Glulam beams 102x457mm	78 m	235.00	\$18,330
Glulam beams 76x419mm	198 m	160.00	\$31,680
Allowance for miscellaneous, plates, connections, bolts, posts, beams, etc.	1 l/s	9,400.00	\$9,400
<u>TOTAL SUB-ELEMENT 036 - BALCONIES AND PROJECTIONS</u>			\$126,870

Description	Quantity	Rate	Amount
ELEMENT 04 - INTERIOR PARTITIONS			
SUB-ELEMENT 041 - PERMANENT PARTITIONS			
Interior partition wall type W3 comprising: 203mm Hollow Concrete Block	45 m2	220.00	\$9,900
Internal wall sundries comprising: Concrete in walls	23 m2	140.00	\$3,220
TOTAL SUB-ELEMENT 041 - PERMANENT PARTITIONS			\$13,120
ELEMENT 04 - INTERIOR PARTITIONS			
SUB-ELEMENT 042 - MOVABLE PARTITIONS			
Nil			\$0
TOTAL SUB-ELEMENT 042 - MOVABLE PARTITIONS			\$0
ELEMENT 04 - INTERIOR PARTITIONS			
SUB-ELEMENT 043 - DOORS			
Internal Parking Level doors comprising: Hollow metal single door size 914mm x 2,032mm including wired glass view panel, metal frame, hardware and finish	18 No	1,500.00	\$27,000
Hollow metal single door size 914mm x 2,032mm including metal frame, hardware and finish	11 No	1,200.00	\$13,200
Hollow metal single door size 2,438mm x 2,032mm including metal frame, hardware and finish	1 No	2,200.00	\$2,200
TOTAL SUB-ELEMENT 043 - DOORS			\$42,400

Description	Quantity	Rate	Amount
<u>ELEMENT 05 - VERTICAL MOVEMENT</u>			
<u>SUB-ELEMENT 051 - STAIRS</u>			
Building vertical movement comprising:			
Elevator pit access ladder	5 No	1,500.00	\$7,500
Concrete stairs complete including finish, handrails, etc	5 No	13,000.00	\$65,000
<u>TOTAL SUB-ELEMENT 051 - STAIRS</u>			\$72,500
<u>ELEMENT 05 - VERTICAL MOVEMENT</u>			
<u>SUB-ELEMENT 052 - ELEVATORS AND ESCALATORS</u>			
2 Stop elevator	1 No	160,000.00	\$160,000
<u>TOTAL SUB-ELEMENT 052 - ELEVATORS AND ESCALATORS</u>			\$160,000

Description	Quantity	Rate	Amount
<u>ELEMENT 06 - INTERIOR FINISHES</u>			
<u>SUB-ELEMENT 061 - FLOOR FINISHES</u>			
Floor finishes comprising:			
Sealed concrete - Allowance	9,868 m2	25.00	\$246,700
<u>TOTAL SUB-ELEMENT 061 - FLOOR FINISHES</u>			\$246,700
<u>ELEMENT 06 - INTERIOR FINISHES</u>			
<u>SUB-ELEMENT 062 - CEILING FINISHES</u>			
Building ceiling finishes comprising:			
Painted gypsum board ceilings	168 m2	12.00	\$2,016
Spray foam underside of concrete parkade	7,699 m2	55.00	\$423,445
<u>TOTAL SUB-ELEMENT 062 - CEILING FINISHES</u>			\$425,461
<u>ELEMENT 06 - INTERIOR FINISHES</u>			
<u>SUB-ELEMENT 063 - WALL FINISHES</u>			
Building wall finishes comprising:			
Paint walls	450 m2	12.00	\$5,400
Wall protection - Allowance	1 l/s	50,000.00	\$50,000
<u>TOTAL SUB-ELEMENT 063 - WALL FINISHES</u>			\$55,400

Description	Quantity	Rate	Amount
<u>ELEMENT 07 - FITTINGS AND EQUIPMENT</u>			
<u>SUB-ELEMENT 071 - FITTINGS AND FIXTURES</u>			
Millwork and accessories comprising:			
Storage lockers	153 No	550.00	\$84,150
Bike racks, wall mounted	29 No	350.00	\$10,150
Fire extinguisher cabinets	50 No	200.00	\$10,000
Miscellaneous millwork allowance	1 l/s	25,000.00	\$25,000
General allowances comprising:			
Signage allowance	1 l/s	15,000.00	\$15,000
Allowance for fire stopping, coring, etc	1 l/s	25,000.00	\$25,000
Allowance for miscellaneous rough carpentry	1 l/s	30,000.00	\$30,000
Allowance for miscellaneous metals	1 l/s	20,000.00	\$20,000
<u>TOTAL SUB-ELEMENT 071 - FITTINGS AND FIXTURES</u>			\$219,300
<u>ELEMENT 07 - FITTINGS AND EQUIPMENT</u>			
<u>SUB-ELEMENT 072 - EQUIPMENT</u>			
Nil			\$0
<u>TOTAL SUB-ELEMENT 072 - EQUIPMENT</u>			\$0

Description	Quantity	Rate	Amount
<u>ELEMENT 08 - ELECTRICAL</u>			
<u>SUB-ELEMENT 081 - SERVICE & DISTRIBUTION</u>			
Service and distribution comprising:			
Permit & site set-up, manuals, bonding, etc	1 l/s	30,000.00	\$30,000
Misc. 600Amp/120/208Volt distribution panels & feeder cables, etc	1 l/s	30,000.00	\$30,000
(1no.) 100kW emergency gen-set, (1no.) 400Amp transfer switches, etc	1 l/s	130,000.00	\$130,000
<u>TOTAL SUB-ELEMENT 081 - SERVICE & DISTRIBUTION</u>			\$190,000

Description	Quantity	Rate	Amount
<u>ELEMENT 08 - ELECTRICAL</u>			
<u>SUB-ELEMENT 082 - PARKADE</u>			
Parkade comprising:			
Fixture type - F1 & F1A - corridor strip-light LED	70 No	225.00	\$15,750
Fixture type - F2 - corridor wall-mounted LED	6 No	250.00	\$1,500
Fixture type - G - parkade LED downlight (c/w motion sensor)	91 No	450.00	\$40,950
Fixture type - L - lobby LED	8 No	300.00	\$2,400
Fixture type - P1 - 25ft pole-mounted (single)	2 No	4,000.00	\$8,000
Fixture type - P2 - 25ft pole-mounted (single)	5 No	4,500.00	\$22,500
Fixture type - P3 - 25ft pole-mounted (double)	4 No	5,500.00	\$22,000
Fixture type - exit	23 No	200.00	\$4,600
Emergency battery pack	7 No	350.00	\$2,450
Remote heads	34 No	75.00	\$2,550
Lamps / LED's	1 No	3,000.00	\$3,000
Fixture installation	239 No	100.00	\$23,900
Fixture conduit & branch wiring	239 No	200.00	\$47,800
Fixture installation - pole mounted	11 No	300.00	\$3,300
Fixture conduit & branch wiring - pole mounted	11 No	750.00	\$8,250
Lighting control - allowance	1 l/s	15,000.00	\$15,000
Switches single pole	4 No	85.00	\$340
Occupancy sensors	22 No	250.00	\$5,500
Miscellaneous lighting requirements - allowance	1 l/s	10,000.00	\$10,000
Receptacles - T-slot	12 No	225.00	\$2,700
Receptacles - GFI	1 No	200.00	\$200
Miscellaneous power supplies	2 No	250.00	\$500
Miscellaneous power supplies - ticket dispenser	1 l/s	350.00	\$350
Miscellaneous power supplies - charger	1 l/s	500.00	\$500
Miscellaneous hydro / power incoming conduits	1 l/s	2,500.00	\$2,500
Junction box - exterior signs	2 No	350.00	\$700
Motor supplies (doors, etc)	2 No	1,000.00	\$2,000
Elevator power supplies	5 No	3,500.00	\$17,500
Mechanical power wiring - allowance	1 l/s	75,000.00	\$75,000
Motorized dampers	1 No	500.00	\$500
Fire alarm horns / strobe combined	19 No	400.00	\$7,600
Pull stations	10 No	150.00	\$1,500
Smoke detectors	6 No	150.00	\$900
Tamper / flow switch - allowance	1 l/s	5,000.00	\$5,000
Fire alarm panel & annunciator - connection to existing building system - allowance	1 l/s	10,000.00	\$10,000
Conduit & wiring	36 No	150.00	\$5,400
Verification	1 l/s	3,500.00	\$3,500
CCTV cameras - rough-in ONLY	2 No	500.00	\$1,000
Card access	11 No	1,500.00	\$16,500
Door contacts	9 No	35.00	\$315
Request to exit	6 No	150.00	\$900

Description	Quantity	Rate	Amount
Electric-strikes	9 No	150.00	\$1,350
Security conduit & wiring - allowance	1 l/s	20,000.00	\$20,000
Miscellaneous security requirements - allowance	1 l/s	5,000.00	\$5,000
Telephone / data outlets - single (pay parking)	1 No	350.00	\$350
Telephone / data outlets - double (pay parking)	1 No	400.00	\$400
Miscellaneous tel / data incoming conduits	1 No	3,000.00	\$3,000
TOTAL SUB-ELEMENT 082 - PARKADE			\$424,955

Description	Quantity	Rate	Amount
<u>ELEMENT 09 - MECHANICAL</u>			
<u>SUB-ELEMENT 091 - PLUMBING AND DRAINAGE</u>			
Plumbing and drainage comprising:			
PRV back-flow station (combined systems)	2 No	15,000.00	\$30,000
storm sump & pumps (duplex lift station)	2 No	20,000.00	\$40,000
footing drain sump	1 No	2,500.00	\$2,500
elevator drain sump & pump	5 No	3,500.00	\$17,500
storm drainage (average pipework)	5,050 ft	45.00	\$227,250
sanitation drainage	3,750 ft	40.00	\$150,000
ventilation pipework	300 No	20.00	\$6,000
catch basin / area drains	31 No	650.00	\$20,150
floor drains (small)	5 No	300.00	\$1,500
floor drains	9 No	500.00	\$4,500
roof drains	5 No	300.00	\$1,500
clean-outs	68 No	100.00	\$6,800
domestic cold water pipework	50 ft	26.00	\$1,300
domestic cold water 8" mains pipework (heat-traced)	130 ft	80.00	\$10,400
domestic cold water 4" mains pipework (heat-traced)	650 ft	45.00	\$29,250
irrigation pipework & connection - allowance	1 l/s	3,000.00	\$3,000
hose bibs	2 No	250.00	\$500
trench drain & collector	1 No	5,000.00	\$5,000
miscellaneous plumbing, storm & sanitary pipework allowance	1 l/s	10,000.00	\$10,000
TOTAL SUB-ELEMENT 091 - PLUMBING AND DRAINAGE			\$567,150
<u>ELEMENT 09 - MECHANICAL</u>			
<u>SUB-ELEMENT 092 - FIRE PROTECTION</u>			
Sprinklers & Fire Protection comprising:			
sprinkler / PRV back-flow station (combined systems) - allowance	2 No	15,000.00	\$30,000
provide dry sprinkler coverage	108,286 sf	1.80	\$194,915
sprinkler mains pipework connection to building	1 l/s	25,000.00	\$25,000
siamese connection	2 No	1,500.00	\$3,000
stand-pipe coverage (1no. level stairwell coverage)	7 No	3,500.00	\$24,500
fire extinguishers - allowance	1 l/s	5,000.00	\$5,000
TOTAL SUB-ELEMENT 092 - FIRE PROTECTION			\$282,415

Description	Quantity	Rate	Amount
<u>ELEMENT 09 - MECHANICAL</u>			
<u>SUB-ELEMENT 093 - HVAC</u>			
Heat, Vent & Air-conditioning comprising:			
Air Handlers and Fans			
parkade electric make-up air-handling unit - small unit	1 No	20,000.00	\$20,000
parkade exhaust fan - 15,750cfm	2 No	13,500.00	\$27,000
parkade exhaust fan - 12,600cfm	3 No	10,800.00	\$32,400
parkade supply & exhaust fans - (10no, - total 3,965cfm)	1 l/s	7,500.00	\$7,500
site set-up/test & commission/balancing, manuals, etc	1 l/s	80,000.00	\$80,000
Heating Water Plant & Equipment & Pipework			
heating plant & equipment, circulation pumps, etc	1 l/s	100,000.00	\$100,000
misc. mechanical rooms heating water pipework systems, valves, etc	1 l/s	50,000.00	\$50,000
miscellaneous supply & return heating water pipework	5,355 ft	30.00	\$160,650
surface parking ice-melt system (4,140sf)	1 l/s	45,000.00	\$45,000
Ductwork and Air Distribution			
sheet-metal ductwork	108,286 sf	0.30	\$32,486
Heating			
hydronic force-flow unit-heaters	47 No	1,500.00	\$70,500
hydronic cabinet unit-heaters	5 No	750.00	\$3,750
electric baseboard heater	2 No	350.00	\$700
Controls comprising:			
computer hardware & software, etc	1 l/s	10,000.00	\$10,000
programmable control system to secondary equipment (make-up AHU)	1 No	3,000.00	\$3,000
programmable control system to secondary equipment (supply & exhaust fans)	15 No	1,500.00	\$22,500
programmable control system to secondary equipment (unit-heaters, etc)	52 No	1,500.00	\$78,000
heating plant & equipment, etc - allowance	1 l/s	25,000.00	\$25,000
programmable control system to storm, sanitary & elevator pumps, etc	1 l/s	30,000.00	\$30,000
motorized damper	1 No	550.00	\$550
carbon monoxide & nitrous oxide detection and control	44 No	800.00	\$35,200
miscellaneous thermostats, switches, etc	13 No	350.00	\$4,550
miscellaneous controls, thermostats, switches, etc	1 l/s	2,500.00	\$2,500
TOTAL SUB-ELEMENT 093 - HVAC			\$841,286

Description	Quantity	Rate	Amount
<u>ELEMENT 10 - GENERAL REQUIREMENTS AND FEE</u>			
General requirements and fee including: site access site accommodation site protection temporary utilities clean up equipment supervision winter conditions insurance's bonds permits head office overhead and fee miscellaneous	Allow 1/s		\$2,053,040
<u>TOTAL ELEMENT 10 - GENERAL REQUIREMENTS AND FEE</u>			\$2,053,040

Description	Quantity	Rate	Amount
<u>ELEMENT 11 - SITE DEVELOPMENT</u>			
<u>SUB-ELEMENT 111 - GENERAL SITE DEVELOPMENT</u>			
Site development comprising:			
General site clearance	10,743 m2	5.00	\$53,715
Miscellaneous removals, etc	1 l/s	10,000.00	\$10,000
Roads, paving's, etc comprising:			
Surface Parking Curbs	98 m	85.00	\$8,330
Allowance for Concrete C.I.P. paving between parkade perimeter walls and site boundary	753 m2	200.00	\$150,600
Allowance for concrete stairs, stair railings and ramps	1 l/s	80,000.00	\$80,000
Line painting allowance	1 l/s	25,000.00	\$25,000
Site fixtures and furnishings comprising:			
Metal guardrail	105 m	160.00	\$16,800
Soft landscaping comprising:			
Nil			\$0
Erosion and Sediment Control:			
Erosion and sediment control allowance	1 l/s	35,000.00	\$35,000
TOTAL SUB-ELEMENT 111 - GENERAL SITE DEVELOPMENT			\$379,445
<u>ELEMENT 11 - SITE DEVELOPMENT</u>			
<u>SUB-ELEMENT 112 - MECHANICAL & ELECTRICAL SITE SERVICES</u>			
Electrical Site Services comprising:			
Electrical (BC Hydro) charges	1 l/s	20,000.00	\$20,000
Incoming conduits & grounding requirements	1 l/s	10,000.00	\$10,000
Excavation and backfill	1 l/s	15,000.00	\$15,000
Mechanical Site Services comprising:			
Incoming water, fire, sanitary, storm pipework connections	1 l/s	50,000.00	\$50,000
excavation and backfill	1 l/s	20,000.00	\$20,000
TOTAL SUB-ELEMENT 112 - MECHANICAL & ELECTRICAL SITE SERVICES			\$115,000

Description	Quantity	Rate	Amount
<u>ELEMENT 11 - SITE DEVELOPMENT</u>			
<u>SUB-ELEMENT 113 - OFF-SITES</u>			
Nil			\$0
<u>TOTAL SUB-ELEMENT 113 - OFF-STES</u>			\$0
<u>ELEMENT 11 - SITE DEVELOPMENT</u>			
<u>SUB-ELEMENT 114 - DEMOLITION</u>			
Not Applicable			\$0
<u>TOTAL SUB-ELEMENT 114 - DEMOLITION</u>			\$0
<u>ELEMENT 11 - SITE DEVELOPMENT</u>			
<u>SUB-ELEMENT 115 - GENERAL REQUIREMENTS AND FEE</u>			
General requirements and fee for Element 11	Allow	1/s	\$59,333
<u>TOTAL SUB-ELEMENT 115 - GENERAL REQUIREMENTS AND FEE</u>			\$59,333
<u>FURNITURE AND FURNISHINGS</u>			
Not Applicable			\$0
<u>TOTAL FURNITURE AND FURNISHINGS</u>			\$0